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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,761

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Eberhard Zielke

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EXAMINER

HIGGINS, GERARD T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

05/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,761	Applicant(s) ZIELKE, EBERHARD	
	Examiner GERARD T. HIGGINS	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment received 02/14/2008 has been entered. Currently claims 1-9 are pending and claims 7-9 are new.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "high energy radiation" in claim 7 is a relative term which renders the claim indefinite. The term "high energy radiation" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. One of ordinary skill would not know at what energy level, radiation ceases to be considered "high energy."

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

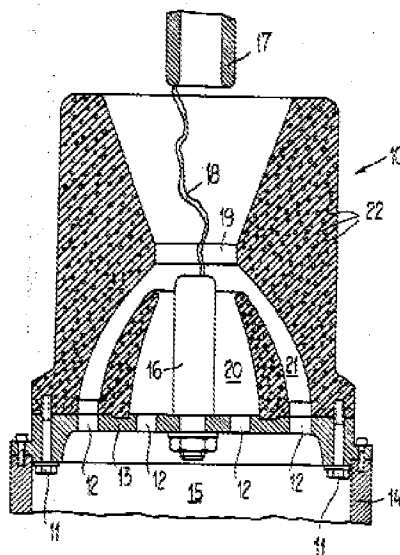
A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Graf (4,418,256).

With regard to claims 1-3 and 9, Graf discloses a “an electrically insulating plastic element or part employed for an electrically switching device...[t]he plastic element is exposed to the action of arcs and contains a filler which absorbs electromagnetic radiation,” wherein an electrically switching device comprises a high voltage power breaker (col. 1, lines 8-14). Graf discloses parts **10** and **22** of Figure 1 at col. 2, line 59 to col. 3, line 24.



Part **10** is formed of a “thermoplastic or duroplastic moldable synthetic resin or a sintered plastic,” which is equivalent to applicant’s second granules (col. 2, lines 59-61). Graf further discloses that in “both cases the plastic mass is leaned or contains admixed therein a filler or filler material **22** which absorbs the electromagnetic radiation

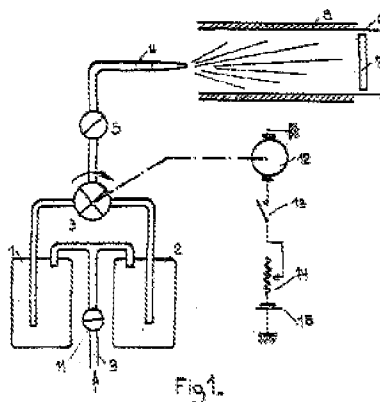
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emanating from the arc **18**", said filler material being equivalent to said first granules (col. 2, lines 61-64). Metal particulate filler material would inherently have an increased electrical conductivity with respect to PTFE. The process of admixing in the filler material would inherently form a part that would have the mixture of subvolumes on the surface of the insulating material piece. Since the metal powder filler is no more than 30% by weight, this therefore means that the amount of PTFE present in the device must be at least 70% by weight, which implies that first subvolume metal filler is embedded in the said second subvolume PTFE.

6. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Dreyfus (3,486,931).

With regard to claims 1, 2, and 5, Dreyfus discloses making a resistive layer, which comprises an insulating piece (Title). They make it using the machine of Figure

1.



The two containers **1** and **2** comprise second and first granules (particles of tin chloride), respectively (col. 2, lines 55-69). The first granules in the container **2** have

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been treated because they do not comprise an oxidizing reagent, which is present with the second granules, and therefore the first granules have a lower resistance (higher conductivity) compared to the second granules from the container **1** (col. 2, lines 55-69). The stopcock **3** then controls the flow coming from both containers, i.e. mixes the first and second granules, and subsequently ejects the mixed solution **4** into the oven **6** onto the receiving plate **7** (col. 2, lines 26-45). The ejection of fluid onto the receiving plate comprises shaping the mixture so as to produce an insulating material piece. Forming the insulating material piece on the receiving plate also means that said mixture lies partially on the surface of the insulating material piece.

With regard to claim 6, the oven **6** and heated receiving plate **7** would comprise a sintering step for the ejected fluid.

While there is no disclosure that the method of forming film oxide resistive layers are “for an electrically high-voltage device” as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that “if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, then the preamble is not considered a limitation and is of no significance to claim construction”. Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such

structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. "for an electrically high-voltage device," recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art method of forming film oxide resistive layers and further that the prior art structure which is an insulating material piece identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

Claim Rejections - 35 USC § 102/103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zielke (WO 99/65128), which is the international application for the US national stage patent 6,627,831, which is used herein as an English translation.

The Examiner notes the following product-by-process limitation:

- the requirement in applicant's claims 1 that the part is made from mixing first and second granules, wherein said first granules have an increased electrical conductivity.

It has been held that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." Please see MPEP 2113 and *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). With respect to the mixing of first and second granules, any article that has regions of different conductivity would be the same or similar to the presently claimed article.

Zielke discloses an "insulating component, which is at least partially composed of plastic, for high-voltage systems, in particular for use in gas-insulated systems, whose conductivity is increased in the region of its surface," which discloses a high voltage power breaker (col. 1, lines 9-12). Zielke further discloses parts **9** and **10** of Figure 1. Part **9** is an "insulating component...which is normally composed of polytetrafluoroethylene" (col. 3, lines 26-28). In order to prevent displacement currents and flashovers, the region of the end face (surface sites) **10** was treated with beta and gamma rays, "which leads to a reduction in the electrical resistance in the region which is subjected to irradiation" (col. 3, line 43 to col. 4, line 5). These limitations anticipate

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or render obvious applicant's claims 1, 2, and 4 because the article of Zielke would be indistinguishable from the article claimed by the process steps in applicant's claim 1.

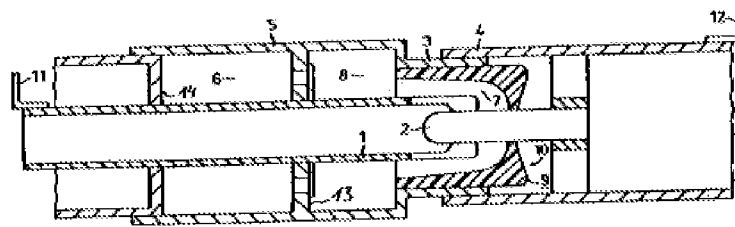


FIG 1

Zielke is silent with respect to the specific ratio of the treated component compared to the untreated component; however, Zielke discloses at col. 4, lines 6-17 that the penetration depth and intensity of the radiation can be varied in order to control the depth of the region of reduced electrical resistance and the extent of molecular change within the region, respectively. The Examiner has reason to believe that the insulating part of Zielke inherently comprises treated subvolumes embedded (< 50% in amount compared to the total amount of treated and untreated subvolumes) in the untreated subvolumes, since in order to still be considered an insulating material piece it would necessarily contain more insulating components (2nd subvolumes) than conductive components (1st subvolumes), and hence the device anticipates applicant's claim 3.

Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the depth and intensity of the beta and gamma radiation to produce an insulating part having the proper amount of electrical resistance for applicant's intended use.

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It has also been held that “[o]nce the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product.” Please see MPEP 2113 and *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). The Examiner has set forth a *prima facie* case that the article of Zielke would be the same or similar to the presently claimed article.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-4 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,627,831.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because the resultant insulating piece is comprised of two subvolumes, including a first subvolume that has an increased conductivity, which partially lies on the surface of the insulating piece. The Examiner has reason to believe that the insulating part of Zielke inherently comprises treated subvolumes embedded (< 50% in amount compared to the total amount of treated and untreated subvolumes) in the untreated subvolumes, since in order to still be considered an insulating material piece it would necessarily contain more insulating components (2nd subvolumes) than conductive components (1st subvolumes); further, both subvolumes may be made of PTFE.

The pending claims are a broader than the conflicting claims, and therefore encompass the difference present in the copending claims. The difference is that the first subvolume of the copending claims is treated with beta or gamma radiation.

Response to Arguments

11. Applicant's arguments, see Remarks, filed 02/14/2008, with respect to the rejection(s) of claim(s) 5 and 6 under 35 U.S.C. 102(b) as being anticipated by Graf (CH 653 477) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made of claims 1, 2, 5, and 6 under 35 U.S.C. 102(b) as being anticipated by Dreyfus (3,486,931).

Applicant is correct in stating at page 9, paragraph 3 to page 10, paragraph 2 that the Graf reference does not teach a treatment step for increasing the conductivity of

the filler material because the filler material was inherently more conductive than the bulk plastic of the device to which it was added.

Dreyfus does teach a method of making a resistive layer (insulating piece). The method is comprised of controlling the mixing of two distinct species, one of which has been treated to be more conductive than the other. In this instance the treatment comprised removing an oxidizing reagent.

12. Applicant's arguments filed 02/14/2008 have been fully considered but they are not persuasive with regard to the rejection of claims 1, 2, and 4 under 35 U.S.C. 102(b) as being anticipated by Zielke (WO 99/65128).

Applicant's amendment, wherein applicant deleted the phrase "at least one subvolume, which is treated so as to change its conductivity," has broadened claim 1. Claim 1 now states that the insulating piece is comprised of a material of higher conductivity mixed with a material of lower conductivity.

As such the Examiner has made a new rejection of claims 1-3 and 9 under 35 U.S.C. 102(b) as being anticipated by Graf (4,418,256) because Graf teaches admixing a material of higher conductivity into a material of lowered conductivity; furthermore, the Examiner has made a rejection of claims 1-4 and 9 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zielke (WO 99/65128).

Applicants argue on page 7 of their Remarks that the mixture of treated and untreated granules would lead to a product that was patentably different from the device

of Zielke, specifically it would lead to a product that had a better mechanical power of resistance; however, the requirement that the device be produced from a mixture of subvolumes is a product-by-process limitation.

It has been held that “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” Please see MPEP 2112 and *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); furthermore, it has also been held that “[o]nce the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product.” Please see MPEP 2113 and *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

It is noted that “the arguments of counsel cannot take the place of evidence in the record”, *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner’s position that the arguments provided by the applicant regarding Zielke (WO 99/65128) must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), “the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001”.

With regard to the Zielke rejection, the Examiner has set forth a *prima facie* case that the article of Zielke would be the same or similar to the presently claimed article despite the product-by-process steps; furthermore, applicant has not provided evidence in the form of a declaration establishing an unobvious difference; specifically, evidence in the form of data regarding the differences in the mechanical power of resistance as well as electrical properties.

13. Applicant's arguments, see Remarks, filed 02/14/2008, with respect to the rejection(s) of claim(s) 1-4 under 35 U.S.C. 101 as claiming the same invention as that of claims 1-3 of prior U.S. Patent No. 6,627,831 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made of claims 1-4 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,627,831.

The Examiner agrees that the amendment of applicant's claim 1 (the addition of "a mixture of granules") are such that they are no longer claiming the same invention; however, the Examiner disagrees that the inventions are patentably distinct. Please see section 10 above for a description of the rejection.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not used art is related to the treating of PTFE with radiation to increase its conductivity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERARD T. HIGGINS whose telephone number is (571)270-3467. The examiner can normally be reached on M-F 7:30am-5pm est. (1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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